

**Notice of Allowability**

Application No.

10/783,002

Examiner

Qing Chen

Applicant(s)

LWO, FUHWEI

Art Unit

2191

**- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on June 16, 2009.
2. ☒ The allowed claim(s) is/are 1-8, 10-17 and 19-26, renumbered as 1-24.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.
- Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 20091218.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_.

/Ted T. Vo/  
Primary Examiner, Art Unit 2191

**DETAILED ACTION**

1. This Office action is in response to the amendment filed on June 16, 2009.
2. **Claims 1-8, 10-17, and 19-26** are pending.
3. **Claims 1, 3-5, 10, 12-14, 19, and 21-23** have been amended.
4. **Claims 9, 18, and 27** have been canceled.
5. **Claims 1-8, 10-17, and 19-26** are allowed, renumbered as 1-24.
6. The objection to the abstract is withdrawn in view of Applicant's amendments to the abstract.
7. The 35 U.S.C. § 112, second paragraph, rejections of Claims 3-6 and 9 are withdrawn in view of Examiner's amendments to the claims or cancellation of the claims.

***Examiner's Amendment***

8. An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to Applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this Examiner's amendment was given in a telephone interview with Jeanine S. Ray-Yarletts (Reg. No. 39,808) on December 18, 2009.

The application has been amended as follows:

AMENDMENTS TO THE CLAIMS

In the “Amendments to the Claims” document (received on June 16, 2009), please cancel Claims 9, 18, and 27 amend Claims 1, 3-5, 10, 12-14, 19, and 21-23 as follows:

1. (Currently Amended) A computer-implemented method for comparing Application Program Interfaces (APIs) between byte code releases, comprising:

inputting class paths common to a first release of byte code and a second release of byte code;

receiving a source input corresponding to [[a]] the first release of the byte code and a target input corresponding to [[a]] the second release of the byte code;

transforming the source input into a first list that contains class names associated with the first release of the byte code, and the target input into a second list containing class names associated with the second release of the byte code;

finding matching class names between the first list and the second list, ~~and;~~

loading only classes corresponding to the matching class names;

comparing the loaded classes corresponding to the matching class names to identify APIs that have been modified between the first release of the byte code and the second release of the byte code, wherein an API has not been modified in case that it maintains a same name, parameter order, parameter types and return types in both the first release of the byte code and the second release of the byte code; and

removing the matching class names from the first list and the second list after the comparing, wherein any class names remaining in the first list represent APIs that have been

removed for the second release of the byte code, and wherein any class names remaining in the second list represent APIs that have been added for the second release of the byte code.

3. (Currently Amended) The computer-implemented method of claim 1, wherein the loading step comprises loading at least one ~~Java~~ class of the first release of the byte code and at least one class of the second release of the byte code.

4. (Currently Amended) The computer-implemented method of claim 3, further comprising listing methods of the at least one class of the first release of the byte code in the first list, and listing methods of the at least one class of the second release of the byte code in the second list.

5. (Currently Amended) The computer-implemented method of claim 4, wherein the comparing step comprises comparing the methods in the first list to the methods in the second list to identify APIs that have been modified between the first release of the byte code and the second release of the byte code.

9. (Canceled)

10. (Currently Amended) A system for comparing Application Program Interfaces (APIs) between byte code releases, comprising:

a computer device;

an input system for receiving class paths common to a first release of byte code and a second release of byte code and receiving a source input corresponding to [[a]] the first release of the byte code and a target input corresponding to [[a]] the second release of the byte code;

a transformation system for transforming the source input into a first list that contains class names associated with the first release of the byte code, and the target input into a second list containing class names associated with the second release of the byte code;

a class matching system for finding matching class names between the first list and the second list;

a class loader for loading only classes corresponding to the matching class names;

a class comparison system for comparing the loaded classes corresponding to the matching class names to identify APIs that have been modified between the first release of the byte code and the second release of the byte code, wherein an API has not been modified in case that it maintains a same name, parameter order, parameter types and return types in both the first release of the byte code and the second release of the byte code; and

a removal system for removing the matching class names from the first list and the second list after the comparison, wherein any class names remaining in the first list represent APIs that have been removed for the second release of the byte code, and wherein any class names remaining in the second list represent APIs that have been added for the second release of the byte code.

12. (Currently Amended) The system of claim 10, ~~further comprising a~~ wherein the class loader ~~for loading loads~~ at least one class of the first release of the byte code and at least one class of the second release of the byte code.

13. (Currently Amended) The system of claim 12, further comprising a method listing system for listing methods of the at least one class of the first release of the byte code in the first list, and for listing methods of the at least one class of the second release of the byte code in the second list.

14. (Currently Amended) The system of claim 13, wherein the class comparison system compares the methods in the first list to the methods in the second list to identify APIs that have been modified between the first release of the byte code and the second release of the byte code.

18. (Canceled)

19. (Currently Amended) A program product stored on a recordable medium for comparing Application Program Interfaces (APIs) between byte code releases, which when executed by a processor, comprises:

program code for receiving class paths common to a first release of byte code and a second release of byte code and receiving a source input corresponding to [[a]] the first release of the byte code and a target input corresponding to [[a]] the second release of the byte code;

program code for transforming the source input into a first list that contains class names associated with the first release of the byte code, and the target input into a second list containing class names associated with the second release of the byte code;

program code for finding matching class names between the first list and the second list;

program code for loading only classes corresponding to the matching class names;

program code for comparing the loaded classes corresponding to the matching class names to identify APIs that have been modified between the first release of the byte code and the second release of the byte code, wherein an API has not been modified in case that it maintains a same name, parameter order, parameter types and return types in both the first release of the byte code and the second release of the byte code; and

program code for removing the matching class names from the first list and the second list after the comparison, wherein any class names remaining in the first list represent APIs that have been removed for the second release of the byte code, and wherein any class names remaining in the second list represent APIs that have been added for the second release of the byte code.

21. (Currently Amended) The program product of claim 19, ~~further comprising~~ wherein the program code for loading loads at least one class of the first release of the byte code and at least one class of the second release of the byte code.

22. (Currently Amended) The program product of claim 21, further comprising program code for listing methods of the at least one class of the first release of the byte code in the first

list, and for listing methods of the at least one class of the second release of the byte code in the second list.

23. (Currently Amended) The program product of claim 22, wherein the program code for comparing compares the methods in the first list to the methods in the second list to identify APIs that have been modified between the first release of the byte code and the second release of the byte code.

27. (Canceled)

-- END OF AMENDMENT --

*Reasons for Allowance*

9. The following is an Examiner's statement of reasons for allowance:

The cited prior art taken alone or in combination fail to teach, in combination with the other claimed limitations, "finding matching class names between the first list and the second list; loading only classes corresponding to the matching class names; comparing the loaded classes corresponding to the matching class names to identify APIs that have been modified between the first release of the byte code and the second release of the byte code, wherein an API has not been modified in case that it maintains a same name, parameter order, parameter types and return types in both the first release of the byte code and the second release of the byte



code” as recited in independent Claim 1; and further fail to teach, in combination with the other claimed limitations, similarly-worded limitations recited in independent Claims 10 and 19.

The closest cited prior art, the combination of US 6,986,132 (hereinafter “Schwabe”) and US 6,430,564 (hereinafter “Judge”), teaches a system and method for remote distributed program verification using API definitions. However, the combination of Schwabe and Judge fails to teach “finding matching class names between the first list and the second list; loading only classes corresponding to the matching class names; comparing the loaded classes corresponding to the matching class names to identify APIs that have been modified between the first release of the byte code and the second release of the byte code, wherein an API has not been modified in case that it maintains a same name, parameter order, parameter types and return types in both the first release of the byte code and the second release of the byte code” as recited in independent Claim 1; and further fails to teach similarly-worded limitations recited in independent Claims 10 and 19.

Any comments considered necessary by Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Qing Chen whose telephone number is 571-270-1071. The

Examiner can normally be reached on Monday through Thursday from 7:30 AM to 4:00 PM.

The Examiner can also be reached on alternate Fridays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Wei Zhen, can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Q. C./

Examiner, Art Unit 2191

/Ted T. Vo/

Primary Examiner, Art Unit 2191